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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/783,527

02/19/2004

Chi-Tsung Peng

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7162

7590

06/23/2006

J.C. Patents
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EXAMINER

CARTER, WILLIAM JOSEPH

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,527

Applicant(s)

PENG ET AL.

Examiner

William J. Carter

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Transitional After Final Practice

Since this application is eligible for the transitional procedure of 37 CFR 1.129(a), and the fee set forth in 37 CFR 1.17(r) has been timely paid, the finality of the previous Office action is hereby withdrawn pursuant to 37 CFR 1.129(a). Applicant's first submission after final filed on 31 May 2006 has been entered.

Drawings

The drawings are objected to because in Figure 3, item P1, seems to be pointing to the optical fiber bundle rather than to an individual optical fiber. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

Art Unit: 2875

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 5 is objected to because of the following informalities:

In claim 5, lines 2-3, "the plastic optical bundle" lacks antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Appeldorn et al. (5,432,876) in view of Presby (4,676,594)

With respect to claim 1, Appeldorn teaches a plastic optical fiber bundle (Fig. 9) comprising a plurality of plastic optical fibers (2) with a plurality of depression (4) for producing a light lead effect (column 7, lines 25-33). Appeldorn does not explicitly teach each plastic optical fiber having an inner core layer and an outer layer, wherein the outer layer of the plastic optical fiber is formed with a plurality of depressions, the depressions not extending into the inner core layer of

Art Unit: 2875

the plastic optical fiber. Presby, also drawn to optical fibers, teaches each plastic optical fiber having an inner core layer (10) and an outer layer (11), wherein the outer layer of the plastic optical fiber is formed with a plurality of depressions (13), the depressions not extending into the inner core layer of the plastic optical fiber (Fig. 5) (although in column 3, lines 1-4, Presby teaches the notch does slightly mar the outer surface of the core, the slight marring does not extend into the inner core layer as seen in Fig. 5). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the depressions into the layers of Presby in the optical fiber bundle of Appeldorn, in order to provide a desired mode scrambling with minimal loss (column 3, lines 1-4).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Appeldorn in view of Presby as applied to claim 1 above, and further in view of Hulse et al. (6,550,952).

With respect to claim 2, Appeldorn and Presby teach all of the claimed elements, as disclosed above, except for a connector being installed between two of the illumination devices. Hulse, drawn to illumination, shows two illuminating devices (90, 91) being coupled with a connector (92). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the connector of Hulse in the illuminating device of Keplinger, in order to illuminate both ends of two connected light pipes (column 6, line 66-column 7, line 2).

Art Unit: 2875

Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appeldorn and Presby as applied to claim 1 above, and further in view of Keplinger (5,345,531).

With respect to claims 3, 4, 6, and 9, Appedorn and Presby teach all of the claimed elements, as discussed above, except for explicitly teaching an illumination structure installed on each end of the optical fiber bundle; a luminary or a spotlight bulb installed in the illumination structure; a protection sleeve accommodating the plastic optical fiber bundle, wherein the depressions on the plastic optical bundle are randomly oriented; wherein the depressions are dot-shaped, "+" shaped, "-" shaped, square-shaped, and star-shaped depressions. Keplinger, also drawn to optical fiber, teaches an illumination structure (21) is installed on each end of the plastic optical fiber bundle (Fig. 5); a luminary (21) is installed in the illumination structure of the plastic optical fiber bundle (Fig. 5); and depressions (28 and 31) are dot-shaped (28) and square-shaped (31) depressions. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the illumination structure and depressions of Keplinger in the optical fiber bundle of Appeldorn, in order to improve the lateral emission of light flux over the length of the assembled fibers (column 1, lines 63-68). In regard to claims 5, 7, 8 and 10, it must be borne in mind that where two known alternatives are interchangeable for their desired function, an express suggestion of the desirability of the substitution of one for the other is not needed to render such substitution obvious. See In re Fout, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982); In re Siebentritt, 372 F.2d 566, 568, 152 USPQ

Art Unit: 2875

618, 619 (CCPA 1967). In this case, the applied prior art (Keplinger) establishes that both different orientations and alternatively shaped depressions were known alternatives (column 4, line 67-column 5, line 7). It would have been obvious to use the "+," "-", and star-shaped depressions of the present application as the depressions (33) of Keplinger. Lastly, one skilled in this art would readily appreciate that the addition of alternative orientations and shapes to the design of the depressions improves both the aesthetic value of the depressions and the adaptability of the depressions.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ashkin et al. (4,630,890).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Carter whose telephone number is (571)272-0959. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (571)272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2875

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wjc
06/14/06


ALI ALAVI
PRIMARY EXAMINER